

**Heating the Quiet Corona by Nanoflares:
Evidence and Problems**

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The content of coronal material in the quiet Sun is not constant as soft X-ray and high-temperature EUV line observations have shown. New material, probably heated and evaporated from the chromosphere is occasionally injected even in the faintest parts above the magnetic network cell interiors.

We discuss the characteristics of the largest of these events, based on simultaneous transition region observations (in EUV and radio) and the observed analogies to flares. Assuming that the smaller events follow the same pattern, we estimate the total energy input. Various recent analyses are compared and briefly discussed. Finally we present the results of a simulation, extrapolating the observed range of microflares to smaller energies. The simulation indicates that the extrapolation to smaller events is problematic and that smaller events may play an even more decisive role than previously assumed. The hypothesis of nanoflare heating is consistent with these observations if the lower corona is not just heated, but continuously replenished by chromospheric material heated to coronal temperatures.